

Part II – Markings

A

General Provisions

Sec. 14-298-600 Legal Authority

Markings as described in sections 14-298-601 to 14-298-636, inclusive, shall be placed or caused to be placed only by the traffic authority having jurisdiction over the regulating, warning and guiding of traffic.

Sec. 14-298-601 Standardization

- (a) All markings used on public and private highways shall conform as prescribed in these regulations, except those markings that are used on the Interstate system shall conform to Interstate standards. Any exceptions to these regulations shall be based on an engineering study and subject to the approval of the State Traffic Commission.
- (b) All dimensions in this part are expressed in English units. Any Connecticut Department of Transportation standards, manuals and guidelines that have been developed in metric dimensions are considered equivalent.

Sec. 14-298-602 Materials

Reflectorized paint, plastic or other suitable materials used as pavement markings shall conform to the color, reflectorization, dimensions, and other specifications set forth in these regulations.

Sec. 14-298-603 Colors

Pavement markings shall be yellow, white, blue or red. The use of black is permitted in combination with the above colors where the pavement itself does not provide sufficient contrast.

Sec. 14-298-604 Longitudinal Pavement Markings

Longitudinal pavement markings shall conform to the following basic concepts:

- (1) Yellow lines delineate the separation of traffic flows in opposing directions or mark the left edge of the roadway of divided and one-way highways and ramps or separation of two-way left turn lane and reversible lane from other lanes.
- (2) White lines delineate the separation of traffic flows in the same direction or the right edge of the roadway.
- (3) Red markings (other than paint) delineate roadways that shall not be entered or used by the viewer of those markings.
- (4) Broken lines are permissive in character.
- (5) Solid lines are restrictive in character.
- (6) Width of line indicates the degree of emphasis.
- (7) Double lines indicate maximum restrictions.
- (8) Pavement markings shall be reflectorized and shall be visible at night.

Sec. 14-298-605 Widths and Patterns of Longitudinal Lines

The widths and patterns of longitudinal lines shall be as follows:

- (1) A normal width line is 4" to 6" wide.
- (2) A wide line is usually twice the width of a normal line.
- (3) A double line consists of two normal width lines separated by a discernible space.
- (4) A broken line is formed by segments and gaps, usually in the ratio of 1:3. On rural highways, a commonly used standard is 10 foot segments and 30 foot gaps. Other dimensions in this ratio may be used as best suit traffic speeds and need for delineation.
- (5) A dotted line is formed by short segments, normally two feet in length, and gaps, normally four feet or longer.

Sec. 14-298-606 Types of Longitudinal Lines

- (a) A normal broken white line shall be used to delineate the edge of a travel path where travel is permitted in the same direction on both sides of the line.
- (b) A normal broken yellow line shall be used to delineate the left edge of a travel path where travel on the other side of the line is in the opposite direction and where crossing the centerline marking for passing with care is permitted for traffic traveling in either direction.
- (c) A normal solid white line shall be used to delineate the edge of a travel path where travel in the same direction is permitted on both sides of the line but crossing the line is discouraged and as a right pavement edge marking. A wide solid white line is used for emphasis where the crossing requires unusual care.
- (d) A double solid white line shall be used to delineate a travel path where travel in the same direction is permitted on both sides of the line, but crossing the line is prohibited.
- (e) A double line consisting of a normal broken yellow line and a normal solid yellow line delineates a separation between travel paths in opposite directions where overtaking and passing is permitted with care for traffic adjacent to the broken line and is prohibited for traffic adjacent to the solid line. This is a one direction no-passing marking. It is used on a two-way, two and three-lane roadways to regulate passing and to delineate the edges of a lane in which travel in either direction is permitted. In the latter application, the markings are to be placed with the solid lines on the outside and the dashed lines on the inside of the lane. Traffic adjacent to the solid line may cross this marking with care only as part of a left-turn maneuver.
- (f) A double line consisting of two normal solid yellow lines delineates the separation between travel paths in opposite directions where overtaking and passing is prohibited in both directions. This is a two direction no-passing marking. Crossing this marking with care is permitted only as part of a left-turn maneuver.

- (g) A double normal broken yellow line delineates the edge of a lane in which the direction of travel is changed from time to time in such a way that the line serves as the centerline during some period. Its use is for a reversible lane.
- (h) A normal dotted line shall be used to delineate the extension of a line through an intersection or interchange area. It shall be the same color as the line it extends.
- (i) A solid yellow line delineates the left edge of a travel path to indicate a restriction against passing on the left or delineates the left edge of each roadway of divided streets or highways, one-way roadways and ramps, in the direction of travel.

Sec. 14-298-607 Transverse Markings

Transverse markings including shoulder markings, word and symbol markings, stop lines, crosswalk lines, and parking space markings shall be white except that:

- (1) Transverse median markings shall be yellow.
- (2) Markings visible only to traffic proceeding in the wrong direction on a one-way roadway may be red.

B

Pavement and Curb Markings

Sec. 14-298-608 Center Lines

A centerline separates traffic traveling in opposite directions. It need not be at the geometrical center of the pavement. The centerline markings on two-lane, two-way highways shall be either:

- (1) a normal broken yellow line where passing is permitted; or
- (2) a double line consisting of a normal broken yellow line and a normal solid yellow line where passing is permitted in one direction, or
- (3) a double line consisting of two normal solid yellow lines where passing is prohibited in both directions.

The centerline on undivided highways, where four or more lanes are always available, shall be a double solid yellow line.

Sec. 14-298-609 Lane Lines

Lane lines shall be used to separate lanes of traffic traveling in the same direction. They shall be used:

- (1) On all multi-lane highways.
- (2) At congested locations where the roadway will accommodate more lanes of traffic than would be the case without the use of lane lines.

Lane lines shall be normally broken white lines which permit lane changing with care.

A normal solid white line may be used as the lane line in critical areas where it is advisable to discourage lane changing and to separate through traffic lanes from special secondary lanes.

A double solid white line shall be used when lane changing is prohibited.

Sec. 14-298-610 No Passing Zone Markings

Where center lines are installed, no-passing zones shall be established on two-lane highways where an engineering study indicates passing must be prohibited because of inadequate sight distances or other special conditions.

A no-passing zone shall be marked by either a one direction, no-passing marking ((e) Sec. 14-298-606) or a two direction, no-passing marking ((f) Sec. 14-298-606).

Sec. 14-298-611 Application of No Passing Zone Markings

On a two-lane highway the no passing marking shall be parallel to and extended along the centerline throughout the no passing zone.

In addition to the pavement markings here prescribed, no passing zone signs may be used to emphasize the existence of a no passing zone.

The no passing marking shall also be used on two-way roadways at pavement width transitions and on approaches to obstructions which must be passed on the right. It shall also be used on approaches to railroad grade crossings. It may also be used at other locations where passing should be prohibited.

Sec. 14-298-612 Warrants for No Passing Zones at Curves

A no passing zone at a horizontal or vertical curve is warranted where the sight distance, based on engineering study, is less than the minimum necessary for safe passing at the prevailing speed of traffic.

Sec. 14-298-613 Pavement Edge Lines

Pavement edge lines shall be used only as a supplement to and not as a substitute for standard center and lane lines.

Edge lines should be provided on all Interstate Highways and may be used on other classes of roads. The lines shall be white except on the left edge of each roadway of divided streets and highways, and on one-way roadways in the direction of travel they shall be yellow.

Sec. 14-298-614 Pavement Marking Extensions Through Intersections or Interchanges

Where road design or reduced visibility conditions make it desirable to provide control or to guide vehicles through an interchange or intersection, (such as at offset, skewed, complex multi-legged intersections or where multiple turn lanes are used) a dotted line may be used to extend markings as necessary through the interchange or intersection area. Where a greater degree of restriction is required, solid lane lines or channelizing lines may be continued through intersections.

Sec. 14-298-615 Lane Reduction Transitions

Where pavement markings are used, lane reduction markings shall be used to guide traffic at points where the pavement width changes to a lesser number of through lanes. No passing markings shall be used to prohibit passing in the direction of the convergence, throughout the transition area.

Sec. 14-298-616 Channelizing Line

The channelizing line shall be a wide or double solid white line. The channelizing line may be used to form traffic islands where travel in the same direction is permitted on both sides. Other markings in the island area such as crosshatching shall be white.

Sec. 14-298-617 Median Islands Formed by Pavement Markings

Two double yellow lines shall be used to form continuous median islands where these islands separate travel in opposite directions. Other markings in the median island such as crosshatching shall be yellow.

Sec. 14-298-618 Marking of Interchange Ramps

For exit ramps, channelizing lines should be placed along both sides of the neutral area between the main roadway and the exit ramp lane. With a parallel deceleration lane, a lane line should be extended from the beginning of the channelizing line for a distance of approximately one-half the length of the full width deceleration lane. White markings may be placed in the neutral area for special emphasis.

For entrance ramps, a channelizing line should be placed along the side of the neutral area adjacent to the ramp lane. With a parallel acceleration lane, a lane line should be extended from the end of the channelizing line for a distance approximately one-half the length of the full width acceleration lane. With a tapered acceleration lane; a lane line may be placed to extend the channelizing line, but not beyond a point where the tapered lane meets the near side of the through traffic lane.

Sec. 14-298-619 Combination Lane and Center Line Markings for Unique Applications

- (a) For reversible lane markings, each edge of the lane shall be marked by the use of a normal broken double yellow line with the gaps and segments adjacent to one another. Signs and/or signals shall be used to supplement the pavement markings.
- (b) A two-way left-turn lane is a lane reserved in the center of a highway for exclusive use of left-turn vehicles and shall not be used for passing and overtaking or travel by a driver except to make a left turn. The lane may be used by drivers making the left turn in either direction. A two-way left-turn lane shall be marked by a broken yellow line toward the two-way left-turn lane and a solid yellow line toward the adjacent lane.

Sec. 14-298-620 Approach to an Obstruction

- (a) Pavement markings shall be used to guide traffic on the approach to fixed obstructions within a paved roadway. An obstruction may be so located that all traffic must keep to the right of it or it may be between two lanes of traffic moving in the same direction. The markings in either case shall be designed to guide traffic away from the obstruction. The use of channelizing lines or no passing markings are generally effective.

- (b) Obstruction approach markings for bridge supports, refuge islands, median islands and channelizing islands shall consist of a diagonal line (or lines) extending from the center line of a lane line to a point one to two feet to the right side or to both sides of the approach end of the obstruction.
- (c) If traffic is required to pass only to the right of the obstruction, the marking shall consist of a no passing marking at least twice the length of the diagonal portion. Yellow markings may be placed in the triangular area so formed.
- (d) If traffic may pass either to right or left of the obstruction, the markings shall consist of two channelizing lines diverging from the lane line, one to either side of the obstruction. In advance of the point of divergence, a wide, solid white line or double white line shall be extended in place of the broken lane line for a distance equal to the length of the diverging lines. It may be desirable where traffic is permitted to pass to both right and left of an obstruction, to place additional white markings in the triangular area between the markings.

Sec. 14-298-621 Stop Lines

- (a) Stop lines are solid white lines, normally 12 to 24 inches wide, extending across all approach lanes.
- (b) Stop lines should be used in both rural and urban areas where it is important to indicate the point, behind which vehicles are required to stop, in compliance with a STOP sign, traffic signal, officers' direction, or other legal requirement.
- (c) Stop lines, where used, should ordinarily be placed 4 feet in advance of the nearest crosswalk line. The stop line should be placed perpendicular to the centerline of the roadway on which the traffic is required to stop. In the absence of a marked crosswalk, the stop line should be placed at the desired stopping point, not more than 50 feet or less than 4 feet from the nearest edge of the intersecting roadway.
- (d) If a stop line is used in conjunction with a STOP sign, it should ordinarily be placed in line with the STOP sign. However, if the sign cannot be located exactly where vehicles are expected to stop, the Stop line should be placed at the stopping point.

Sec. 14-298-622 Crosswalk and Crosswalk Lines

- (a) Crosswalk lines shall be solid white lines marking both edges of a crosswalk. They shall not be less than six inches in width and should not be spaced less than six feet apart.
- (b) Crosswalks should be marked at all intersections where there is substantial conflict between vehicle and pedestrian movements. Marked crosswalks should also be provided at other appropriate points where pedestrians could not otherwise recognize the proper place to cross. For added visibility, the area of the crosswalk may be marked with white diagonal lines or with white longitudinal lines. These lines shall be approximately 12 inches to 24 inches wide and spaced 16 inches to 24 inches apart. When diagonal or longitudinal lines are used to mark a

crosswalk, the transverse crosswalk lines referred to in subsection (a) may be omitted. School crosswalks shall use 24 inch wide longitudinal lines, spaced 24 inches apart.

Sec. 14-298-623 Speed Measurement Markings

A speed measurement marking is a transverse marking placed on the roadway for the purpose of assisting in the enforcement of speed regulations. Speed measurement markings shall be white and shall not be greater than 24 inches wide. They may extend approximately 2 feet on either side of the centerline or edgeline of the paved surface at 1/4 mile intervals over a one-mile length of roadway. Advisory signs may be used in conjunction with these signs.

Sec. 14-298-624 Parking Space Markings

Parking space markings shall be white.

Sec. 14-298-625 Pavement Word and Symbol Markings

- (a) Word and symbol markings on the pavement may be used for the purpose of guiding, warning, or regulating traffic. They shall be limited to not more than a total of three lines of words and/or symbols. They shall be white in color.
- (b) The word "STOP" shall not be used on the pavement unless accompanied by a stop line and STOP sign.
- (c) The word STOP shall not be placed on the pavement in advance of a stop line, unless every vehicle is required to stop at all times.

Sec. 14-298-626 Preferential Lane Markings

- (a) When a lane is assigned full or part time to a particular class or classes of vehicles, the preferential lane markings shall be used. The marking is intended to convey that a restriction on the class or classes of vehicles permitted to use the lane exists, and it is supplemental to signs or signals conveying the specific restrictions. Signs or signals shall be used with the preferential lane markings.
- (b) The preferential lane markings for a high-occupancy vehicle lane shall be the elongated diamond detailed in the Standard Alphabets for Highway Signs and Pavement Markings. The diamond shall be formed by white lines at least 6 inches in width, shall be at least 2 1/2 feet in width and 12 feet long and shall be placed coincident with the longitudinal center of each restricted lane.

C

Object Markings

Sec. 14-298-627 Object Marker Design

When obstructions within or adjacent to the roadway require marking, the marker shall consist of an arrangement of one or more of the following designs:

Type 1 - Either a marker consisting of nine yellow reflectors, each with a minimum dimension of approximately 3", mounted symmetrically on an 18" yellow or black diamond panel, or an all yellow reflective diamond panel of the same size. Type 1 markers may be larger if conditions warrant.

Type 2 - Either a marker consisting of three yellow reflectors, each with a minimum dimension of approximately 3", arranged either horizontally or vertically on a white panel; or an all yellow reflective panel, 6" x 12". Type 2 markers may be larger if conditions warrant.

Type 3 - Striped marker consisting of a vertical rectangle approximately 1 foot by 3 feet in size with alternating black and reflectorized yellow stripes sloping downward at an angle of 45° toward the side of the obstruction on which traffic is to pass. The minimum width of the yellow stripe shall be 3 inches. A better appearance can be achieved if the black stripes are wider than the yellow stripes.

Sec. 14-298-628 Objects in the Roadway

Obstructions within the roadway, shall be marked with a Type 1 or Type 3 object marker.

Sec. 14-298-629 Objects Adjacent to the Roadway

Objects not actually in the roadway may be so close to the edge of the road that they need a marker. Type 2 or 3 object markers are intended for use at such locations. The inside edge of the marker should be in line with the inner edge of the obstruction.

Sec. 14-298-630 End of Roadway

The marker for the end of a roadway, at which point there is no alternate vehicular path, should be either a marker consisting of nine red reflectors, each with a minimum dimension of approximately 3", mounted symmetrically on an 18 inch square, red or black panel; or an 18 inch square reflectorized red-panel. More than one marker or a larger marker may be used at the end of the roadway where conditions warrant. The minimum mounting height of this marker should be four feet. Appropriate advance warning signs should be used.

D

Delineation

Sec. 14-298-631 Design

Delineators shall consist of reflector units capable of clearly reflecting light under normal atmospheric conditions from a distance of 1,000 feet when illuminated by the high beams of standard automobile lights. Reflective elements for delineators should have a minimum dimension of approximately 3 inches.

Sec. 14-298-632 Curb Markings for Delineation

Reflectorized solid yellow markings should be placed on the curbs of islands located in the line of traffic flow where the curb serves to channel traffic to the right of the obstruction. Reflectorized solid white markings should be used when traffic may pass on either side of the island.

Sec. 14-298-633 Delineator Application

- (a) The color of delineators shall, in all cases, conform to the color of edge lines.
- (b) Delineators used on through two-lane, two-way roadways shall be single white reflector units on the right side.
- (c) Single delineators shall be provided on the right side of expressway roadways and on at least one side of the interchange ramps.
- (d) Single delineators should be provided on the outside curves on the interchange ramps.
- (e) Double or vertically elongated delineators should be installed at 100 foot intervals along acceleration and deceleration lanes.
- (f) Delineation is optional on sections of roadway between interchanges where continuous lighting is in operation.

Sec. 14-298-634 Delineator Placement and Spacing

Delineators, if used, should be mounted on suitable supports so that the top of the highest reflector is about 4 feet above the near roadway edge. They should be placed not less than 2 or more than 8 feet outside the outer edge of the shoulder, or if appropriate, in the line of the guardrail.

E**Colored Pavements****Sec. 14-298-636 Colors**

The use of the following colors for pavements shall be limited to the purposes noted:

- (1) Red shall be used only on the approaches to a STOP sign which is in use 24 hours a day.
- (2) Yellow shall be used only for medians separating traffic flows in opposing directions.
- (3) White shall be used for delineation on shoulders, on channelizing islands where traffic flows pass on both sides in the same general direction, and for crosswalks.